

**WHAT IS CLAIMED IS:**

1. An image sensor to be electrically connected to a printed circuit board,  
the image sensor comprising:

a lower metal sheet set including a plurality of lower metal sheets arranged  
5 in an array and a lower middle board arranged among and flush with the lower  
metal sheets, each of the lower metal sheets having an upper surface and a lower  
surface, and the lower middle board having an upper surface and a lower surface;

an upper metal sheet set including a plurality of upper metal sheets arranged  
in an array and an upper middle board arranged among and flush with the upper  
10 metal sheets, each of the upper metal sheets having an upper surface and a lower  
surface, the lower surfaces of the upper metal sheets being stacked on the upper  
surfaces of the lower metal sheets, respectively, the upper middle board having an  
upper surface and a lower surface, and the lower surface of the upper middle  
board being correspondingly stacked on the upper surface of the lower middle  
15 board;

an encapsulant for encapsulating the lower metal sheets, the lower middle  
board, the upper metal sheets and the upper middle board with the upper surfaces  
of the upper metal sheets, the lower surfaces of the lower metal sheets, the lower  
surface of the lower middle board, and the upper surface of the upper middle  
20 board exposed from the encapsulant, and with a frame layer formed around the  
upper surfaces of the upper metal sheets to define a chamber together with the  
upper metal sheets, the exposed lower surfaces of the lower metal sheets being

electrically connected to the printed circuit board;

a photosensitive chip arranged on the upper surface of the upper middle board and located within the chamber;

a plurality of wires for electrically connecting the photosensitive chip to the  
5 upper surfaces of the upper metal sheets; and

a transparent layer arranged on the frame layer of the encapsulant to cover the photosensitive chip.

2. The image sensor according to claim 1, wherein the encapsulant is made of industrial plastic material, and the encapsulant and the frame layer are  
10 integrally formed.

3. The image sensor according to claim 1, wherein the transparent layer is a piece of transparent glass.

4. A method for packaging an image sensor, comprising the steps of:

providing a lower metal sheet set including a plurality of lower metal sheets  
15 arranged in an array and a lower middle board arranged among and flush with the lower metal sheets, each of the lower metal sheets having an upper surface and a lower surface, and the lower middle board having an upper surface and a lower surface;

providing an upper metal sheet set including a plurality of upper metal  
20 sheets arranged in an array and an upper middle board arranged among and flush

with the upper metal sheets, each of the upper metal sheets having an upper surface and a lower surface, the lower surfaces of the upper metal sheets being stacked on the upper surfaces of the lower metal sheets, respectively, the upper middle board having an upper surface and a lower surface, and the lower surface  
5 of the upper middle board being correspondingly stacked on the upper surface of the lower middle board;

providing an encapsulant for encapsulating the lower metal sheets, the lower middle board, the upper metal sheets and the upper middle board with the upper surfaces of the upper metal sheets, the lower surfaces of the lower metal sheets,  
10 the lower surface of the lower middle board, and the upper surface of the upper middle board exposed from the encapsulant, and with a frame layer formed around the upper surfaces of the upper metal sheets to define a chamber together with the upper metal sheets;

mounting a photosensitive chip to the upper surface of the upper middle  
15 board and within the chamber; and

arranging a transparent layer on the frame layer of the encapsulant to cover the photosensitive chip.

5. The method according to claim 4, wherein the encapsulant is made of industrial plastic material, and the encapsulant and the frame layer are integrally  
20 formed by way of injection molding.